

The Role of Foreign Assistance in the Economic Growth of Developing Countries

by

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“Little else is requisite to carry a state to the highest degree of opulence from the lowest barbarism than peace, easy taxes, and tolerable administration of justice; all the rest being brought about by the natural course of things.” Lecture by Adam Smith in 1775

I. The Underlying Forces that Drive Economic Growth

Adam Smith was making several points about economic growth (i.e. “the highest degree of opulence”) when he spoke these prescient words in 1775 (cited by E.L. Jones, 1981, p. 235). The unit of observation is the state and it is also the decision maker in Smith’s world, because it provides what are now considered key elements of good economic governance—“peace, easy taxes, and the tolerable administration of justice.” Democracy is not mentioned in Smith’s list; as the political mechanism to ensure good economic governance, that comes much later. Smith’s final point is also among the most controversial: economic growth will be “the natural course of things” because of how people behave and the pressures of competition from the “invisible hand.”

The human behavior that led Smith to make these observations seems to be wired very deeply in our brains (Jared Diamond, 1997; E. L. Jones, 1988). From this behavioral (and historical) perspective, development is seen as a long-run sequence of decisions by economic agents, acting in their own self interest, that culminate in rising investment levels and higher labor productivity. The “miracle” of advanced living standards is the set of institutions that permit, even encourage, these decisions for very long periods of time—a century or longer (Jones, 1981). At a growth rate of just two percent per capita per year, a \$1,000 income becomes \$8,000 in that century, and \$64,000 after two centuries. That is how the United States and Europe became rich—two major wars and, in Europe, increasingly heavy tax regimes, notwithstanding.

The difficult task today is for less-developed countries to sustain the “Smithian conditions” over a long enough period of time to realize the promised opulence. To say that “good governance” is the bridge that connects an investment-promoting tax regime and a system of justice that protects property rights (as well as human rights) within a

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stable, peaceful (and democratic) country is to say the obvious, but it is no less important for that.

In view of the record in transition economies and much of Sub-Saharan Africa, it seems that we know little of how to help countries build this bridge, at least, how to build it quickly when few foundations are in place. Chapter 2 provides a number of helpful guidelines on what we do know (L. Diamond, 2002). Still, the “mechanics” of economic development, to use Robert Lucas’ provocative term, are of virtually no use without effective economic governance (Lucas, 1988). If political, ethnic, tribal, or religious rivalries prevent a central government from implementing a coherent and stable macroeconomic strategy, supported by the rule of law, there is little hope for a rapid escape from poverty. Without effective economic governance, virtually nothing of what follows in this chapter will matter.

With effective economic governance, however, much is on promise, because *the only long-run hope of the poor is to live in a growing economy*. In some circumstances even economic growth may not be enough to reduce poverty significantly and additional efforts will be needed. Analyses carried out since Smith was writing have identified the circumstances and we review them in what follows.

The primary focus of this chapter, then, is on starting or speeding up growth in the economies of poor countries. There is some scope for making growth policies “pro-poor,” but the real challenge in most poor countries is to get any sustainable growth at all. At least for the next generation, U.S. strategy for poverty reduction in developing countries must be focused on poor *economies*. Clearly, the next step is to figure out how to get economic growth going in the many countries where the ingredients are missing.

There are two ways to approach this problem. The first is to look at current experience, country by country, treating each as a special case, and assess what these countries are doing right or wrong. The second is to look at the long-run record of economic growth to determine the underlying causes of growth and identify what is missing in countries with poor growth performance.

The first approach will keep myriad policy analysts, consultants and academic researchers productively engaged for decades; the time- and site-specific findings will no doubt be useful in their time and place. But such short-run analysis has not solved the development problems in these countries in the past and there is no reason to think it will solve them now. Somehow the problems run deeper than current political squabbles, debt ratios, or changes in the terms of trade. The second approach is taken here.

A. The Evolution of Thinking on Economic Growth

Economists have conceptualized the process of economic growth around three basic models: specialization and trade; investment in machines; and increasing returns to knowledge. Although the models are overlapping to an extent and potentially complementary, each model has been held out at some point in the history of economic thought as the fastest road to riches. Some variants of the “machine model” even promised a turnpike (Dorfman, Samuelson and Solow, 1958; Rostow, 1990).

Much of classical economics was devoted to understanding the process of economic growth. As already noted, Adam Smith was highly optimistic about the prospects for higher living standards, to be achieved primarily by the higher labor productivity that resulted from specialization in, for example, the many tasks involved in pin making. Specialization could only succeed through trade and the process was then limited by the size of the market. By lowering trade barriers—artificially imposed by governments or naturally caused by long distances or difficult terrain—larger markets became accessible to manufacturers. Competition—the invisible hand—would force them to more and more specialized forms of production, thus raising labor productivity and living standards. To be successful, this trade-intensive strategy of economic growth required many transactions, increasingly at long distance, so the institutions defending property rights and lowering transactions costs, such as rule of law, came to be seen as the foundation of a market economy. That is, economic governance has long been seen as an essential starting point for the economic growth process, not something that is tacked on in mid-stream.

The visible success in the 19th century of the Industrial Revolution, first in Britain and then in France and Germany, changed how economists thought about the growth process. Technological change, created by a new scientific enterprise and embodied in machines, became the driving force of development (Landes, 1969, 1990, 1998). And if not all countries could invent and produce their own machines, all were free to import them and reproduce the factory system that was making Europe so rich and powerful. A “capital fundamentalism” emerged that stressed the accumulation of savings to be used to invest in machines that embodied the latest technologies, the origins of which were *exogenous* to the day-to-day activities of factory managers or national economic planners.

The “machine model” was clearly open to countries in a hurry to catch up with their rich neighbors or distant trading partners. Many institutional elements of Adam Smith’s “trade model” could be circumvented, or substitutes found, if the investment and production process did not have to rely on the profit motive of private investors, but instead relied directly on decisions of national planners. Early German industrialization was a “deliberate act of policy” (Cole and Deane, 1965) and it changed the balance of both economic and military power in Europe by the end of the 19th century. The pace of Soviet industrialization changed the balance of power again during the middle half of the 20th century.

The “machine model” worked reasonably well when two conditions held: first, when relatively little trade was needed to permit labor specialization as the source of higher productivity. The higher productivity was generated instead through intensification of capital goods, with production primarily for domestic markets; and second, when appropriate technology in the form of capital equipment was readily available domestically or from the world market.

As the pace of scientific innovation accelerated in the advanced countries, however, and productivity growth relied increasingly on knowledge directly rather than on technology embodied in machines, the model stumbled in country after country. In those countries with nascent institutions to support low-cost trade and absorption of western knowledge rather than just machines, such as Korea, Taiwan, Israel and Brazil, the transition to export-led growth was feasible if not always smooth. In countries without these institutions, including nearly all of Africa and most of the Islamic world, the failure of economic governance led to rapidly failing economies. After years, even decades of steady economic growth, they have slipped back into economic decline and rising levels of poverty. A number of these countries have slipped even further, into chaos and conflict.

The new model of economic growth that explains this performance is based on increasing returns to knowledge. That is, instead of diminishing marginal returns as more and more identical machines are used for a given labor force, marginal returns to knowledge actually increase with greater use because of spillovers, at no marginal cost, to additional users. Large economic payoffs from new knowledge, especially in the early years of application when patent rights provide market power, encourage economic entrepreneurs to develop it, using the fundamental science produced in modern research universities and corporate research centers.

Thus economic growth, instead of depending on exogenous technical change, is now seen to be an *endogenous* process of response to incentives throughout the entire economic system, not just at the level of firm investments or consumer decision making (Easterly, 2001). The modern concern for enforcing intellectual property rights as well as property rights for land, goods and financial assets is easy to understand from the perspective of this “knowledge model.” A failure to defend intellectual property rights will slow the search for useful new knowledge, and hence the rate of economic growth.

The difficulty of endogenous growth for the still poor countries is that knowledge generation and development of sophisticated human capital depend at least as strongly on the “foundation institutions” that ensure property rights and low transaction costs as the Smithian “specialization and trade” model that gave rise to them. It was the long time needed for each society to evolve its own such institutions and investments that gave rise to the search for substitutions that could speed the economic growth process (Gerschenkron), a search that largely failed in the third world. There is an uneasy sense in the development profession that we are back to square one (Landes, 1990; Easterly, 2001). As Easterly reminds us, the “quest for growth” in this world of increasing returns to knowledge is quite elusive.

B. The Empirical Record of Economic Growth

All models of economic growth emerge as attempts to explain the empirical record, however stylized the facts are that describe it (Solow). Modern growth empirics trace from the pioneering work of Clark and Kuznets (1955, 1966), through the increasingly sophisticated frameworks of growth accounting developed by Denison, Abramovitz, Baumol and Nelson, to the high-tech econometrics of Barro and his associates (1994, 1995, 1997), Mankiw and his colleagues, and a legion of users of the Summers-Heston data set. Only the key results for our understanding of the long-run growth process are highlighted here.

First, it is clear that empirics have driven theory, rather than the other way around, an entirely appropriate approach for a discipline that tries to explain human decision making in the face of scarce resources. The contrast with the field of international trade, heavily dominated by theorists, is striking (Davis and Weinstein, 2001).

Second, given the diversity of experience with economic growth—over time and across countries—most “sensible” variables can be shown to influence the growth process under some set of circumstances, if the researcher looks hard enough. Capital, labor, education, government investment spending, low inflation, macroeconomic stability, openness to trade, the quality of institutions, and democracy all contribute positively to economic growth in some set of countries or time period.

Third, with a specialist’s insights and motivation, and hard work assembling the necessary data sets, more particular or specific factors can be seen at work. Unstable prices for commodity exports slow down economic growth (Dawe, 1993, 1996; Collier and Denn, 2001). A favorable balance between rural and urban education, serving as a proxy for reduced “urban bias,” speeds it up (Lipton, 1977, 1993; Chai, 1995). Trade openness turned out to be bad for economic growth in the 1930s and 1940s, of little importance one way or the other in the 1950s and 1960s, but highly significant in explaining rapid economic growth in the 1970s and 1980s (Vamvakidis, 1997).

Finally, one factor emerges from both the long-run historical record of individual countries and the shorter post-World War II cross-section record for developing countries as crucial to sustained growth. Rapid factor accumulation, driven by high domestic savings rates or foreign capital inflows, can lift a poor country onto the first rung of the development process. But eventually, improvements in *total factor productivity*, or the efficiency with which all inputs are used, including capital, must become the main source of higher incomes. This realization was the real driving force behind the development of the “knowledge model” of development (Romer, 1986, 1990; Prescott, 1998).

The difficulties in making the transition from the “machine model” to the “knowledge model” in a trade-driven global economy are clearly seen in the growth record of the 1990s. According to statistics in the World Bank’s *World Development Report, 2002*, more than a third of the 108 developing or transition economies had lower per capita incomes in 2000 than in 1990, and none of these were countries directly affected by the

Asian financial crisis that started in 1997. The decade saw some of the fastest growth in global output, and in volumes of international trade, on record, so the external environment was favorable to growth. The sources of poor performance must be sought within the countries themselves.

None of the 38 poor performers are in Asia. Nearly half (18 of 38) of these countries were part of the former Soviet Union, testimony to the failure of shock therapy to speed the transition to a market economy in the absence of market institutions. Africa accounted for another 14 countries, testimony to the continuing, widespread difficulty in arresting the economic erosion that has been continent-wide for decades. And despite reasonable economic performance for the region as a whole, four countries in Latin America and the Caribbean suffered decade-long declines.

Such long-term economic problems point to deep-seated failures to establish the core elements that support modern economic growth. The list of these elements is not long, but they are basic: provision of public goods and social infrastructure, a stable macroeconomic environment, and a conducive business climate. Why do governments fail to provide these essentials for growth? Indeed, why do some governments actively seek to undermine them?

Modern political economy has tried to answer these questions. Rational choice models of political actors explain why state agents collect private goods from public resources, but they are less successful in explaining how to correct the vicious circle of corruption within the dynamics of a society's own political system (Srinivasan, 1985; Alesina and Rodrik, 1994; L. Diamond, 2002). Even democratic systems with regular elections have not been immune from these dynamics, so it is not possible to recommend with confidence any single approach as a short-run remedy.

C. Mapping a Way Forward: The Task Ahead

To be successful, this chapter must establish the general validity of three relationships:

1. *The connection between economic growth and reduction in poverty.* This connection might be *absolute*, in the sense that any economic growth is good for the poor and no further attention to poverty reduction, as opposed to economic growth, is needed. Alternatively, the connection might be *conditional*, in the sense that economic structure, initial conditions of asset and income distribution, the sector in which growth takes place, or even government policies, could influence the extent to which the poor participate in economic growth. The debate over the "quality of growth" is about the nature of conditions, if any, that connect the poor to the process of economic growth (World Bank, 2000);

2. *The relationship between what governments do and the pace of economic growth.* It is obvious that government action, or inaction, can slow down the growth process or stop it altogether. In the extreme, partisans in failed states can fight over the immediate distribution of the spoils from war, immiserizing all in

their path. The relationships sought here are more positive: the need (and potential) for governments to provide public goods and a stable economic environment that stimulate trade and investment. Good economic governance will be essential for governments to realize this potential (L. Diamond, 2002); and

3. *The relationship between foreign assistance, broadly construed, and poverty reduction in developing countries.* Multiple mechanisms will be at work within this relationship, and they complicate the incentive systems that should link donor behavior to appropriate responses by recipient governments and civil servants. Assistance mechanisms include direct humanitarian assistance to feed the hungry, educate or train the poor and illiterate, or cure the sick; remittances from abroad that provide consumption goods or capital to establish family-based microenterprises; technical assistance from donor countries to improve policy design and program implementation; loans to build roads, hospitals, irrigation systems and telecommunication networks; and balance of payments support to ward off financial crises. Clearly, designing an incentive system to call forth efficient delivery of food aid will be very different from one that maximizes the productivity of private remittances. Repeatedly bailing out countries from failed macroeconomic policies, or forgiving their international debt, creates perverse incentives—moral hazards—that encourage the very policies and behavior that are the problem in the first place (Meltzer, 2000). A recent and burgeoning empirical literature on this topic attests to its importance and, alas, to its complexity and contradictory signals (Collier, 2002; Collier and Dollar, 2001; Crosswell, 1999, 2001).

There is a logic to the ordering of these topics. Considerable controversy remains over whether economic growth reaches the poor, over whether growth worsens income distribution (and thus might make the poor even poorer), even whether growth is desirable at all (Kuznets, 1966; Ravallion, 2001). This controversy must be addressed first. Then, because the record shows clearly that economic growth is the main mechanism for reducing poverty, we must understand how to do it. The role of government in this will be crucial, even if a key lesson is that the governments of many poor countries are making things worse by increasing economic risks and transaction costs for entrepreneurs seeking to do business in their countries.

Finally, how can we help--the United States government collectively and our citizens individually? In setting up the questions in this order, and asking them in this way, an important assumption has been made: it is in our interests that the economies of poor countries develop and that their citizens participate equitably in the process. To many, especially after September 11, 2001, this is obvious, and substantial resources should be devoted to making it happen. To many others, a clear articulation of the national interest in helping the world become less poor is needed to justify the distortions to private incentives that taxation, necessary for the mobilization of those resources, imposes. Unless we know for sure that foreign assistance can speed the reduction of poverty, this debate is moot. Thus, to chart a way forward, we first look more closely at the link between economic growth and the reduction of poverty.

II. Reducing Poverty

Defining poverty, establishing its causes, and finding mechanisms to reduce its incidence are major conceptual and empirical undertakings, the results of which can only be highlighted here. Fortunately, the literature is vast and easily accessible. A guide to web-based accessibility is provided in Box 1.

[Box 1 on sources and access, especially from the World Bank]

This literature is not, however, easily summarized because the messages are contentious and overlaid with ideology and political rhetoric. Still, several robust themes can be noted here.

First, how poverty is defined matters to such elemental issues as whether the numbers of poor are increasing or decreasing, in absolute terms or relative to population. When life expectancy and literacy, for example, are included with income in defining poverty, then unambiguous progress at a global level has been made in the past several decades in reducing the numbers of the population defined as poor (Fox, 2002). By contrast, if poverty lines are established in U.S. dollars at market exchange rates, even the share of the population defined as poor seems to have risen in recent years (Wade, 2001).

The confusion resulting from such disparate measures and results is important because the mechanisms by which poverty can be reduced are obscured. Is income growth everything? It is, if it is all that counts. Or can initiatives to direct health and education programs to the poor substitute effectively for the more difficult task of getting economic growth going? This debate can easily paralyze governments and aid agencies alike.

The only effective way forward is to make the discussion more regionally specific and causally concrete. In any given household, village, province, city, country or region, the reality and causes of poverty will be easier to identify than at a global level. At the lower levels poverty becomes more visible because it is more human. Careful research can reveal its determinants, even ways forward to reduce its incidence (Morduch, 1994). An added advantage of this perspective is that it also avoids the rather sterile debate over global trends in poverty and income distribution. The important action is at the country level, or within, because that is where national policies can be effective. There are few global policy instruments for reducing poverty.

Such a micro perspective can be frustrating, however, in two ways. First, it condemns "one size fits all" approaches as irrelevant in many empirical settings. Second, the very complexity of local determinants of poverty can mask the powerful but indirect impact of macroeconomic forces, trends in commodity prices, or evolving demands for skill levels in labor markets. These factors are the ultimate mechanisms for an escape from poverty.

Balancing detailed understanding of the determinants of poverty at the local level with an understanding of national and global economic forces is one of the most difficult tasks

facing poverty analysts and policy makers. It is easy enough to list plausible determinants of poverty, harder to quantify their significance in general. The richness of the micro empirical record, however, argues that low economic productivity of poor households is the proximate cause of poverty.

Behind this low productivity can lie supply factors, such as limited availability of land, skills, or appropriate technology. Demand factors, such as prices for commodities grown and sold, availability of productive jobs, and access to urban markets for handicrafts can also sharply influence the incidence of poverty in any given setting. Key to both supply and demand factors is the importance of local markets to provide a low-cost and convenient arena of exchange for the goods and services produced by the poor. *It is virtually impossible to escape from poverty except through market exchanges.*

The importance of market exchange illuminates the role of governance in causing and reducing poverty. Bad governance means poorly defined property rights, high transaction costs, large economic risks, and outright theft. Markets disappear in such environments and with them the hopes of the poor for an escape route from poverty. With lost hope often comes despair and fatalism. Sometimes it leads to migration to better opportunities, whether legal or not. On occasion, it breeds violence (Collier, 2001).

There are also more technical determinants of poverty, or factors that are visible to observers but are hard to incorporate in general models of development. Cultural or religious factors are often high on the list. At least in the short run, attitudes, levels of trust, traditions, religious taboos, preferences for leisure and the like can be barriers to rapid change. But the evidence is not persuasive that these factors are long run barriers to economic behavior, when the long run spans centuries rather than decades (E. L. Jones, 1988).

Environmental degradation is often thought to be both cause and effect of poverty. Especially in settings where the poor depend on common property resources to survive, individually rational behavior with respect to resource exploitation and family fertility can lead to a downward spiral in productivity and environmental degradation (Dasgupta, 1993). This is one form of poverty trap that is inescapable without new resources, new technology, or migration to better opportunities. The environmental dimensions of economic growth and poverty reduction are vastly complicated, from deforestation and loss of species diversity, to loss of productive agricultural land, to global warming and climate change (Vincent and Mahler, forthcoming). This chapter recognizes these complex dimensions but argues that sound economic growth policies are the *solution* to these environmental problems, not their cause.

A final determinant of poverty is perhaps its most visible—hunger and malnutrition. The development profession continues to argue over which causes which, but hunger as a *measure* of poverty is widely established. Most poverty lines have an explicit or implicit food component. Preventing famines, children from becoming acutely malnourished, and mothers from delivering underweight babies has motivated much of the humanitarian

assistance delivered around the world. With abundant food in rich countries, it seems a tragic waste not to feed the hungry in poor countries. With powerful political forces aligned behind this reasoning and much popular support for foreign assistance driven by television images of starving children, it would be foolish, even dangerous to ignore the link between hunger and poverty.

And yet the link is more tenuous than supposed. The evidence for nutritional poverty traps, where workers are too malnourished to work hard enough to feed themselves and their families, has strong historical dimensions (Fogel, 1991, 1994; Bliss and Stern, 1978; Strauss, 1986; Strauss and Thomas, 1998). But simple energy shortages cannot account for very much of the chronic poverty observed over the past several decades because the cost of raw calories, in the form of staple foods, has fallen too sharply relative to wages for unskilled labor (Fox, 2002). If inadequate food intake is the primary *cause* of poverty, the solution would be in sight. If, however, poverty is the main cause of inadequate food intake, hunger will be much harder to end.

A. How Well Do the Poor Connect to the Growth Process?

The publication by the World Bank in 1996 of the Deininger-Squire data set on income distribution and levels of poverty allowed preliminary testing of many theoretical models that attempted to explain links between economic growth and reduction in poverty. At one level, the new data have supported a very comforting story. There is no longer room to doubt that rapid economic growth reduces poverty. Even cursory analysis of the Deininger-Squire data set on changes in income distribution over time reveals only a small handful of examples where economic growth on average failed to increase per capita incomes in the bottom twenty or forty percent of the income distribution.

But most economists and nearly all policy makers are reluctant to stop at this point in the analysis because modern economic history--since World War II--has left large, and in some regions of the world, growing numbers of poor people despite global economic growth that has been rapid by earlier historical standards. Are these poor trapped in low-growth environments? Are there circumstances where economic growth does not reach the poor? Do alternative measures of poverty change the story? For example, stories about widening income gaps and the poor being left behind have powerful political resonance even when the percentage of overall income earned by the bottom quintile has not deteriorated. Absolute poverty carries a powerful moral and emotional charge. Income distribution, despite its central role in neoclassical economic theory, is politically and economically messier to handle. Fortunately, it is possible to examine the empirical growth record using the Deininger-Squire data set to understand the relationship between reductions in poverty and changes in income distribution and to improve the connection between economic growth and poverty alleviation revealed by this record.

Income distribution matters because it affects how well the poor connect to the growth process. Society might care little about income distribution *per se*, but a great deal about those living in absolute poverty. Analyzing the prospects of these families requires data on their circumstances, such as from the Deininger-Squire data set, as well as an

understanding of the economic and political mechanisms that connect the poor to economic growth. One of these connection mechanisms is *mediated* by income distribution, as the following analysis indicates.

Following on a burgeoning literature using the Deininger-Squire data set (reviewed in Gugerty and Timmer, 1999), Timmer (1997) examined the question of how well the poor share in economic growth by directly estimating the “elasticity of connection,” or the degree to which a percentage increase in overall per capita incomes translates into a percentage increase in the per capita income of the poorest quintile. In addition, this analysis addressed the question of whether the sectoral composition of growth matters for the incomes of the poor, thus moving beyond *absolute* connections to *conditional* ones.

1. The Impact of Income Distribution on the “Elasticity of Connection”

The necessary technical details of this analysis are shown in Box 2. The conclusions, challenging as they are for the “growth-is-all-that-matters school,” are easy to summarize.

[Box 2: Estimating the “Elasticity of Connection”]

Both the sector in which growth originates and the initial distribution of income matter greatly to how well the poor connect to overall economic growth. Indeed, two fundamentally different growth processes seem to be at work with respect to the roles of labor productivity in agriculture and non-agriculture, and how these affect incomes in each of the five quintiles of the income distribution. In countries where the gap between the incomes of the bottom quintile and the top quintile is less than twice as large as average per capita income—that is, where the income gap is relatively *small*, labor productivity in agriculture is slightly but consistently *more important* in generating incomes in each of the five quintiles than growth in labor productivity in the nonagricultural sector.

Furthermore, agricultural productivity has a noticeable “anti-Kuznets” effect in these countries, i.e. *economic growth actually improves income distribution rather than worsens it*. A similar “anti-Kuznets” effect is seen from the non-agricultural sector and this impact is even more important to the poor in the long run because the non-agricultural sector makes up, on average, 75 percent of the overall economy. It also has the capacity to grow significantly faster than the agricultural economy over sustained periods of time. When the starting point for economic growth is a reasonably even distribution of income, the growth process itself reaches the poor in an effective manner. Agricultural growth is more effective than nonagricultural growth in such circumstances.

The contrast with countries where the relative income gap is large—more than twice the average per capita income—is striking. In the poorest quintile, workers are virtually disconnected from the national economy (see Figure 1 in Box 2). The impact of growth in either agriculture or nonagriculture is the same for the poor, a statistical disconnect. *In economies with sharply unequal distributions of income, the poor do not participate significantly in economic growth*. However, the elasticity of connection rises sharply by income class and exceeds one for the top quintile. There, agricultural productivity

growth is especially favorable to the rich, no doubt because of unequal asset distribution, particularly of land. These results show the importance of understanding the impact of asset distributions on income prospects of the poor.

2. Asset Distribution and Poverty

It is virtually impossible to understand the impact of economic growth on income distribution and of income distribution on the rate and distribution of economic growth without incorporating the distribution of assets held by the society. Assets are important because they are a measure of the capital available to an individual, or society, for the production of goods and services. Assets are likely to be distributed even more unequally than income. In a world of perfect data, one would rather examine the distribution of assets than income, but in reality, data on the distribution of assets are almost non-existent, particularly for developing countries.

What empirical evidence there is, however, suggests important linkages between assets and incomes of the poor. Deininger and Squire (1998) find that initial income inequality and initial land inequality both have negative impacts on the incomes of the poor, but not on the rich. Using the initial distribution of land as a proxy for the distribution of assets, they find that asset inequality has a significant negative effect on subsequent growth and this effect is stronger in low-income countries than in high-income countries. In addition, initial land inequality has a negative effect on rates of schooling, suggesting that the link between inequality and growth for the poor is mediated through credit rationing; the poor are unable to borrow to make investments in human capital.

Birdsall and Londono (1997) also examine the impacts of asset inequality on the income of the poor using the Deininger and Squire data. They find that inequality in the distribution of land and education negatively impact income growth of the poor. Datt and Ravallion (1997) examine the effects of inequality on the elasticity of poverty reduction in India using a model similar to Timmer (1997). They conclude: “[c]ertain inequalities can severely impede the prospects for poverty reduction through non-farm growth...Initial inter-sectoral disparities in earnings...influence how much non-farm economic growth reduces the incidence of poverty. In addition, the higher the initial poverty rate, the less effective is non-farm economic growth in reducing poverty.” Non-farm productivity is less effective in poverty alleviation in states with “poor” initial conditions.

Additional research extends this result. Ravallion and Datt (1996) have shown that the sectoral composition of growth matters to poverty reduction in India: poverty measures in India have responded far more to rural economic growth than urban economic growth. In addition, their work indicates that the connection of the poor to rural economic growth is quite robust over time, at least in India.

Both theoretical and empirical work, then, suggest that inequalities may persist over time, and that certain inequalities particularly penalize the poor. The next step in the research agenda is to better understand the underlying distribution of wealth in an economy and its

implications for the economic and political sustainability of growth (Alesina and Perotti, 1993; Anand and Kanbur, 1993). There is virtually no data available on asset distribution in developing economies, but it is possible to use the Deininger and Squire data on income distribution to develop a simple, stylized model of asset distribution and its evolution over time. The details of this model are illustrated with an example in Box 3. The underlying framework and the key results are discussed below.

[Box 3: An Empirical Example Comparing Brazil and Thailand]

For the analysis here, capital assets are divided into four categories: physical labor, human capital, financial capital, and social capital. Some simple assumptions are made about the returns to these various forms of capital to generate several striking lessons.

1. *Physical labor* is what an individual can exert without using any other form of capital to raise productivity. Somewhat arbitrarily, this physical labor is valued at \$365 per year in terms of purchasing power parity (PPP), which is simply one of the World Bank's poverty lines. If a worker's income depends entirely on competing with a horse, tractor, or bulldozer, by expending physical energy, the expected income is likely to be low indeed. Incomes below \$365 per year reflect significant poverty and the likely depletion of human capital in the form of reduced health and nutritional status.

2. *Human capital* comes from education and on-the-job training (in addition to physiological contributions from health and nutrition). It is useful to consider three categories of human capital: (a) that arising from literacy and numeracy, both of which should result from a primary education; (b) more formal analytical and reasoning skills that result from a high school education; and (c) advanced professional skills and research training that come from college and post-graduate education.

Again, somewhat arbitrarily, primary education in a developing country is assumed to generate \$1,000 per year (in \$PPP) for the holder, whereas finishing high school results in an additional \$5,000 per year in earnings. Thus, by assumption, a worker with a completed high school education, or the equivalent in on-the-job training, is expected to earn \$6,365 per year (\$365 for physical labor returns, \$1,000 for primary school returns, and \$5,000 for high school returns). *This simple assumption about returns to human capital has powerful implications for the distribution of assets, including financial assets.* Because earnings from college and post-graduate education vary so widely, and are often seen as a return on financial investment, they are included in the financial category.

3. *Financial capital* permits ownership of land, industrial plant and equipment, and other financial assets. This category, of course, is what most people think of as "assets," and determining their distribution has bedeviled both theorists and empiricists for decades. As a simple example of an age-old controversy in economics, should capital assets be valued at what they cost, minus depreciation, or at market value as determined by the discounted flow of income? The market value approach has the obvious merit of putting all assets on a similar valuation basis, and of linking directly income flows with

asset values. The disadvantage is the near tautology implied between incomes and asset values. The link can be altered only when the discount rate changes.

The empirical work reported in Box 3 does not break down financial capital into more workable components, especially land, industrial capital, and financial assets, *because this whole category of capital does not become important to income generation until well into the development process*. Lack of access to land, or industrial jobs, will obviously reduce the earnings of the poor with no other capital at their disposal. But the surprising fact is that variations in human capital seem able to account for most of the differences in income distribution among poor countries, at least when income is disaggregated only to the quintile level. This fact opens important policy opportunities.

4. *Social capital* has taken the economic development profession by storm (Woolcock, 1998, 1999). By various measures, it seems to account for order-of-magnitude differences in incomes among individuals in African villages (Narayan and Pritchett, 1999), as well as similarly large differences in incomes among countries (Knack, 1998). The social networks, institutional infrastructure, and level of trust among economic agents that might account for these differences in productivity are the subject of major research efforts, much of it in the field of economic history (North, 1992). Without a consensus yet on how to define social capital or attribute productivity differences to it, this chapter merely observes that there are likely to be at least two different levels at which social capital operates, with substantially different policy implications.

First, social capital seems to exist at the micro level, connecting individual villagers whose knowledge of each other can be turned into collateral for loans, for example. An entire microfinance industry is growing around this realization (1999). At the other end of the spectrum, social capital in the form of deeply-rooted institutions that support property rights and rule by law also seem to have macro level implications for productivity and economic growth (Olson, 2000). Indeed, North argues that these institutions fully account for the differences in welfare levels between rich and poor countries. Empirical analysis of the lasting effects of different types of institutional investments by colonial powers shows both the huge quantitative impact of institutions on income growth as well as their lasting footprints to the present (Acemoglu, Johnson, and Robinson, 2001; Easterly, 2002). Consequently, it does not seem outlandish to suggest that societies with a full “portfolio” of social capital might have labor productivity that is twice as high as in a similar society with serious shortfalls in social capital, *holding other forms of capital constant*. Translating this reality into effective development policy is well beyond the scope of this chapter, but the historical perspective it requires is an important lesson in itself.

B. Is there a Special Role for Agriculture in Economic Growth and Poverty Reduction?

Many readers will be surprised to find a prominent section on the role of agriculture in this chapter on economic growth and reduction of poverty. Economists will be surprised

because the arguments so far have emphasized the primacy of market forces, which leaves little scope for special attention to a particular sector of the economy. Policy makers will be surprised to find emphasis on a sector which holds little promise for rapid economic growth or contribution to a knowledge-based economy. Agriculture is, after all, a declining sector during a successful structural transformation, at least in relative terms. Even political scientists, who might be counting the large number of rural votes in newly democratic poor countries, will be dubious about the desire of most governments to redress decades of urban bias.

So, highlighting the role of agriculture in poverty reduction and economic growth is tricky. But it is not wrong. The agricultural sector specifically, and the rural economy more broadly, are uniquely important to connecting the poor to the economic growth process, because so many of them live in or come from rural areas. Further, growth in agricultural productivity has demonstrable economy-wide benefits, many of which receive no value in commodity markets where farmers sell their output. The case for developing an agricultural strategy is clear, even if it must be carefully constrained by market realities and institutional capabilities. This case, summarized here, is presented in detail in Timmer (forthcoming).

1. Agriculture and Economic Growth

How does agriculture affect economic growth? First, there is the obvious national income accounting identity: the change in national income is equal to the growth rates in the agricultural and nonagricultural sectors, weighted by their respective shares in aggregate GDP. It is worth noting that where the agricultural share is large, the direct contribution of agriculture to total economic growth can also be substantial. This obvious but often forgotten fact is also an ingredient in the fast growth of city-states such as Singapore and Hong Kong, which never faced the drag of a large, slow-growing agricultural sector or the need to make large infrastructure investments to modernize that sector.

For countries where the share of agriculture is still significant, changes in agricultural productivity can influence the growth process through a set of indirect and roundabout linkages. They can be categorized by each of the variables in a standard production function: the location of the local technological frontier; the rate of physical capital deepening; the rate of human capital deepening; and any changes in the economic or institutional "environment" that influences how closely an economy operates relative to its local frontier (Mundlak, 2000, 2001).

Impact on the Rate of Shift in the Local Technological Frontier.--Increases in agricultural value added earn foreign exchange that permits imports of foreign technology, where new technology is embodied in physical capital. It should be noted that agricultural exports have a very high ratio of value added, unlike many manufactured exports that rely heavily on imported materials and components. On the other hand, there may be few knowledge spillover effects from exporting traditional agricultural products, thus forgoing one of the main growth stimulants from foreign trade specified in the

endogenous growth literature. Earning foreign exchange is one of the standard Johnston-Mellor linkages (Johnston and Mellor, 1961). There is, however, evidence that very heavy dependence on primary exports is a significant factor influencing the probability of violent conflict within a country (Collier, 2001).

Impact on the Rate of Physical Capital Deepening.--Savings from the agricultural sector are a function of agricultural value added, and in a semi-closed economy, or one with imperfect capital markets, higher savings translate into faster physical capital deepening (Feldstein and Horioka, 1980). The sector in which the investment takes place will depend on financial intermediaries (for private savings), or mechanisms of savings extraction (for example, taxation or pricing policy). This is a standard Lewis linkage (Lewis, 1954).

Savings may be less productive for growth if in government hands rather than private hands, after minimum government revenues are available to fund affairs of state. It should be recognized, however, that these public revenues can have very high productivity when invested in public goods and infrastructure that raise the profitability of private sector investment in agriculture (Teranishi, 1997). If agriculture is more easily taxed than nonagriculture in the early stages of development, perhaps by border taxes on exports, the agricultural sector may well provide revenue for this important, initial stage of public sector investment.

Impact on the Rate of Human Capital Deepening.--Rural education levels can be influenced by growth in agricultural productivity and rural incomes (Chai, 1995; Birdsall et al., 1995). Such education can raise farm productivity directly (Jamison and Lau, 1982). It can also make the migration process much less painful and more economically rewarding for children who leave the farm (Johnson, 1997; Larson and Mundlak, 1997).

Improved nutritional intake can raise labor productivity through the processes examined in historical England and France by Fogel (1991, 1994). Although in principle staple foods are tradable, in fact there is a very high correlation between increases in food production and increases in food consumption within regions and countries. The "Fogel linkages" can thus be stimulated by growth in agricultural output, especially food output.

Impact on the Rate of Change in "Environmental" Variables.--A wide range of variables might cause economies to produce at less than their technically efficient level. Lack of economic freedom, poor institutions, ineffective economic policies, and political instability all have been shown to slow down economic growth, when controls are included for initial conditions and factor accumulation (Barro, 1997). How changes in agricultural productivity might affect these "efficiency shifters" is a matter of considerable speculation and relatively little empirical evidence. Two mechanisms for which evidence is accumulating involve price stability, because investments are more efficient when signal extraction problems are reduced (Lucas, 1973; Dawe, 1996; Rock, 2001), and political economy considerations, because restive rural populations can challenge political leaders if they are left behind during the process of rapid economic growth (Anderson and Hayami, 1986).

Other linkages that Johnston and Mellor identified might also work through these “environmental” variables. For example, producing raw materials for industrial processing suggests that capacity utilization in the industrial sector might depend on agricultural productivity. Earning foreign exchange might have the same impact on imported intermediate goods, which are often crucial for producing manufactured exports.

It is, of course, important not to forget the critical direct contribution that agricultural development has made historically to economic growth. As stressed by Lewis (1954) analytically and by Johnson (1997) empirically, lower food prices stimulated by rapid technological change in agriculture have contributed substantially to higher living standards directly, especially for the poor who spend a large share of their budget on basic foodstuffs, and indirectly by keeping real wage costs low in the industrial sector, thus fostering investment and the structural transformation. It is argued, however, that these benefits of low food prices are as easily accessed by trade as by investing in the domestic agricultural sector (Sachs, 1997). What is the significance of other contributions from agricultural modernization that would be missed with a pure trade strategy?

Plausible candidates include the loss of backward and forward linkages that connect cities with the countryside. Without these linkages, societies risk greater vulnerability to fluctuations in world markets, inequities between rural and urban inhabitants, more under employment in rural areas, and excess migration. The returns to good rural-urban linkages include a relatively smooth structural transformation, as seen in Taiwan, in contrast to the difficulties seen in Thailand (Tabor, 2002; Timmer, 1988).

Surprisingly, in view of the length of time the debate has been going on, there are still no satisfactory tests of the impact of changes in agricultural productivity on the several mechanisms of “catch-up growth” outlined above, or on the value of good rural-urban linkages. There is evidence generated from a large data-gathering project at the World Bank led by Don Larsen, Will Martin, and Yair Mundlak, that total factor productivity in agriculture tends to grow faster than in manufacturing (Martin and Mitra, 1996). This result alone argues that past investments in agriculture have had large economic returns (Mundlak, 2001).

2. Does Rural Growth Mediate Poverty Reduction?

The work of Ravallion, Mellor and Timmer shows the empirical role of rural growth in connecting the poor to economic growth, both within and outside the rural economy. Without firm theoretical underpinnings, however, these empirical observations provide only casual guidance to policy makers seeking to make the growth process more pro-poor. It would be better to understand the mechanisms at work as well as the facts (Sarris, 2001).

Fortunately, much progress has been made in the past decade in identifying these mechanisms. Foremost in this effort is the recent model of agricultural growth, rural employment and poverty reduction that emphasizes the role of nontradables in pulling underemployed workers out of agriculture into the nonagricultural rural economy (Mellor, 2000). This model, drawing on Mellor's earlier work in India (Mellor, 1976), shows the importance of rural incomes as the driver of demand for the goods and services produced in the nonagricultural rural economy and how this economy links to urban demand, especially when it is driven by rising incomes from workers in labor-intensive export industries.

The Mellor model is the first to explicitly recognize ~~this connection between manufactured export performance,~~ the role of the nontradables sector in the rural economy, and subsequent reductions in poverty. Thus the model explains why countries with rapid growth from labor-intensive manufactured exports, that also have substantial agricultural sectors, had such good records of poverty reduction. But the nontradable sector is often ignored by policy makers and donors precisely because so much emphasis is placed on the role of exports and open-economy strategies for economic growth. Retargeting public expenditures in support of a more balanced strategy will not sacrifice overall growth performance but it will increase its impact on reducing poverty (Mellor, 2000).

Two other components of the relationship between rural growth and poverty reduction should be noted. First, political commitments to rural growth imply a more balanced political economy, with less urban bias than has been seen in most developed countries historically (Lipton, 1977, 1993; Timmer, 1993). ~~The developing world has already seen a notable reduction in the macroeconomic biases against agriculture, such as overvalued currencies, repression of financial systems, and exploitive terms of trade. Further progress might be expected as democracy spreads and empowers the rural population in poor countries.~~

The second important component is the linkage between urban and rural labor markets, often in the form of seasonal migration and remittances. There is no hope of reducing rural poverty without rising real wages for rural workers. Rising wages have a demand and a supply dimension, and migration can affect both in ways that support higher living standards in both parts of the economy. Migration of workers from rural to urban areas raises other issues, of course, but those issues depend fundamentally on whether this migration is driven by the push of rural poverty or the pull of urban jobs. Either way, the food security dimensions of rural-urban migration are clear. Urban markets become relatively more important in supplying food needs for the population. Whether the rural economy or the world market is the best source of this supply will be one of the prime strategic issues facing economic policy makers (Naylor and Falcon, 1995; Tabor, 2002).

C. Implications for Policy

This perspective on the links between economic growth and poverty reduction suggests two policy arenas where government actions might strengthen the connection even when

the starting point with respect to income and asset distribution is unfavorable. In turn, we discuss the mechanisms for “getting agriculture moving,” to use Arthur Mosher’s memorable phrase (Mosher, 1966), and initiatives to develop human capital, especially for the rural population.

1. Getting Agriculture Moving

There is no great secret to agricultural development. Mosher (1966) and Schultz (1964) had identified the key constraints and strategic elements by the mid-1960s. New agricultural technology and incentive prices in local markets combine to generate profitable farm investments and income streams that simultaneously increase commodity output and lift the rural economy out of poverty (Hayami and Ruttan, 1985). The process can be speeded up by investing in the human capital of rural inhabitants, especially through education, and by assistance in the development of new agricultural technology, especially where modern science is needed to play a key role in providing the genetic foundation for higher yields.

Beyond this level of general understanding, however, the diversity of rural circumstances has sharply impeded its implementation. At the regional level, for example, neither the agricultural technology nor the incentive prices in rural markets have been reliably available in Sub-Saharan Africa. In Asia, success in linking the nontradable sector in rural areas to urban markets and labor-intensive export growth has been mixed at best. And in Latin America, extreme rural poverty has largely migrated to urban areas, so the poverty problem is now primarily an urban problem (Painter, 2001; Haddad, Ruel and Garrett, 1999). Central America and Mexico continue to face acute rural poverty, however, and rural strategies will be needed to reduce it (de Janvry and Sadoulet, 2000, 2001).

The mechanisms for both technology development and provision of rural price incentives are no longer as clear as they were in the 1960s. The CGIAR system has a laudable record of important breakthroughs for many of the world’s staple foodcrops. But funding for the system has been threatened as the market prices of these crops have dropped to historic lows, under the weight of productivity gains in developing countries and publicly subsidized crop surpluses in rich countries. Few countries have the scientific resources to conduct basic crop research on their own, so a large question looms. Where will agricultural technology come from for the additional 3 billion people expected in the next 50 years? Biotechnology holds out both promise and concern; even in the best of circumstances it is largely a product of scientific enterprise, public and private, in rich countries.

There is an obvious role for the United States in answering this question. First, starving the CGIAR centers of funding to pursue essential and basic crop research with spillovers to many countries is very short-sighted, and U.S. leadership in restoring budgets is likely to have major add-on effects. Second, our university system is the best in the world at training scientists in basic biology and applied agricultural fields. We have an opportunity to provide the next generation of these scientists for the entire world.

Apart from its indirect impact on funding for the CGIAR system, the sharp drop in commodity prices in world markets also has a more immediate impact (Fox, 2002). Open borders and flexible markets for foreign exchange transmit these low prices directly into the markets of poor countries, often with devastating impact on local farmers (Dawe, 2001; Tabor, 2002). Rich countries find ways to protect their farmers against such low prices, but poor countries cannot afford the subsidies, or defend the trade interventions, that would be needed to do the same. "Agriculture-led economic growth" is impossible unless it is profitable.

Instability in food prices also remains a concern, especially with open borders and the possibility of sharp movements in exchange rates (Islam and Thomas, 1996). In 1998, for example, the collapse of the Indonesian rupiah during the financial crisis caused the landed price of imported rice to increase more than four-fold. Indeed, for a time, it was profitable to export rice in the same year as one of the worst El Niño-induced droughts in history! In open economies, food price instability has macroeconomic roots as well as local supply and demand roots. If some degree of food price stability is a political imperative, new tools will be needed to provide it (Timmer, 1989).

Many place their hopes for solving the problems of price levels and price instability on new rules regulating agriculture in the WTO. But negotiations leading to useful new rules are likely to be very difficult, with Europe and Japan still extremely reluctant to abandon their farmers to free markets. The United States is under great pressure from Congress not to give away its subsidy tools as mechanisms to keep U.S. farming profitable, but the U.S. Department of Agriculture (USDA) has taken a clear stance in favor of reduced subsidies and freer trade in agriculture.

Lowering tariffs and other barriers to trade is fundamental to expanding exports. The average food and agricultural tariff is 62 percent, much higher than tariffs on manufactured items. Both developed and developing countries have high tariffs. Exports to the large potential markets in South Asia (including India) and to South America must overcome tariffs of 113 and 40 percent, respectively. The United States has one of the lowest food and agricultural tariffs, at 12 percent, and thus stands to gain immensely from ambitious tariff cuts. However, the United States still maintains some high tariffs that protect specific commodities.

In addition to tariffs, high levels of domestic support for agriculture and export subsidies distort agricultural markets. In contrast to tariffs that are applied by almost all countries, developed countries account for virtually all domestic support and export subsidies. The Organization for Economic Cooperation and Development (OECD) estimates that in 2000, developed countries' total support for agriculture was \$327 billion. In that same year, total production supports by the European Union were \$90.2 billion, compared to \$49 billion by the United States. The European Union dominates use of export subsidies, accounting for approximately 90 percent of total annual spending since the Uruguay Round Agreement on Agriculture (URAA) took effect.

USDA research shows that removing all forms of agricultural protection and support could raise world prices 12 percent, over half of this from removing tariffs alone. Our producers and the industries they support could see the value of U.S. agricultural exports grow 19 percent. Global economic welfare would increase by \$56 billion annually by removing existing distortions (USDA, 2001, p. 40).

The way forward on these negotiations is badly in need of leadership. USAID is in a strong position to provide this leadership, speaking as it does for development interests within the U.S. government. Furthermore, USAID's recognition of the "new agriculture" in its Background Paper on *Future Directions for Agriculture* is a signal of intellectual and bureaucratic readiness to take on this challenge (USAID/EGAT, 2002).

Part of the challenge may involve acceptance by the United States of agriculture's "multifunctionality" as the basis for domestic policies that have clear social, environmental, or security rationale. With this acceptance, the United States could take the lead in the Doha Round of WTO negotiations to design rules explicitly recognizing what reasonable functions might be for agriculture in different countries and at different stages of development. For example, environmental protection would be an acceptable role for domestic agricultural policies in all countries, whereas policies to stimulate basic grain production to enhance domestic food security would be restricted to countries with limited access to world markets or poorly developed internal marketing systems.

In the end then, what are the components of an agricultural strategy and how can USAID help countries develop one? First, obviously, is a supportive macroeconomic policy, one that yields low inflation, a reasonably stable exchange rate, positive real interest rates, and perhaps some monitoring of short-run capital flows. Second, "getting prices right" extends good macro policy to the trade arena, where an open economy with low barriers to internal and external trade should generate a level playing field for producers and consumers alike.

What remains after this? The externalities from rural growth outlined above argue for policy attention and budget priorities for the rural nontradables sector, once agricultural technology is in place as the basis for profitable farming. Part of the profitability for this sector will come from a labor-intensive export sector that is successfully linked into the global economy. Rapid growth in this export sector creates demand for labor directly as well as for the goods and services of the rural economy that raise demand for labor indirectly.

Improving the rural financial system, both to permit farmers to make long-run investments and as a vehicle for handling intersectoral financial flows such as savings and remittances, will take time, but is essential to a successful structural transformation. None of this is rocket science, but all of it requires talented policy analysts and government administrators. Training them in U.S. universities and empowering them when they return home is a powerful form of U.S. foreign assistance and one in which USAID has considerable experience.

2. Investing in Human Capital

Investments in human capital improve the distribution of assets in the early stage of economic development, and therein is a clear policy message. For “pro-poor growth,” a country must invest in the human capital of its poorest citizens. At the earliest stages this will involve primary health clinics, household food security, and access to rural schools. Policies that encourage the efficient functioning of rural financial markets can also play a role in increasing the poor’s access to capital. Later it will mean opportunities for high school education and on-the-job training as unskilled and semi-skilled labor. Such investments, if broad-based and of adequate quality, will keep the distribution of income from becoming highly skewed until well into the development process, *and thus lead to the near elimination of absolute poverty*. Taiwan and South Korea managed such investments until middle income status; Brazil, the Philippines, and Thailand did not.

An optimistic policy interpretation of these results is that fiscally manageable investment strategies are available for even the poorest countries to set themselves on a growth path that includes the poor. The pessimistic interpretation suggests that political forces or bad governance will keep this from happening where the “starting point” in income and asset distribution already prevents the poor from connecting to the growth process. But surely this is a result that the donor community can grasp--it provides donors with a rationale for investing in the very people that countries' leaders themselves might choose, or be forced, to ignore. Then the policy dialogue, and the resources that could be mobilized behind it, can have dramatic effects.

III. The Role for External Actors in a World of Endogenous Growth

If economic growth is endogenous to the knowledge-generation process in each country, the institutions of good economic governance must be built locally, and domestic agricultural potential can only be realized in each specific ecological setting, how do external actors play a role in economic development? The answer comes at three levels: through direct engagement by individuals, through trade and investment by firms, and through collective choices exercised through governments.

A. Through Direct Engagement

Americans are deeply troubled by images of starving children with flies swarming around their vacant eyes, by ten-year old boys with Kalashnikov rifles fighting brutal and seemingly mindless wars against their own people, and by angry rhetoric from the Third World that holds the United States responsible for these ills. Americans as individuals, as 50 years of polling evidence attests, are eager to help. The nation has a deep well of humanitarian concern that wants to end hunger and poverty, resolve bloody conflicts, and extend human rights to all. But the polling evidence also consistently reports that the public doubts the ability of the U.S. government to achieve these goals. So, how do we help?

Opportunities abound for Americans to be engaged. As private individuals, we send money directly to poor people, poor villages, or poor countries through our churches, temples, synagogues and mosques. We join and support service organizations such as Rotary clubs and special-function, non-governmental organizations (NGOs) such as Save the Children or Project Concern International. We even send money directly via Western Union or other channels to our friends or families abroad. Such direct remittances now total more than \$50 billion per year to developing countries and rival official development funding.

When viewed from this perspective of individual freedom of choice, the opportunities for U.S. residents to help solve the problems of poverty in less developed countries run across an incredibly wide spectrum, *a nearly complete private market of mechanisms for personal involvement in international development.*

At one end of this spectrum, the array of NGOs involved in overseas development is vast and growing daily: an individual can choose among those focusing solely on emergency humanitarian assistance, such as the International Red Cross, or NGOs dedicated to longer-term development efforts, such as OXFAM, WorldVision, or Catholic Relief Services, with programs on education, on-the-job training, or agricultural extension. Recently, two former World Bank officials have launched www.DevelopmentSpace.com, “the e-Bay of development assistance.” The site links social investors in rich countries with development entrepreneurs in poor countries, by-passing the bureaucracy of official development agencies. The opportunities for individuals to be directly engaged in development activities according to their own preferences and financial abilities have never been greater.

B. Engagement through Trade and Investment

Americans also enjoy the bountiful and cheap consumer goods delivered from factories in developing countries. At the same time, they are concerned by reports of child labor and sweat-shop working conditions employed to produce these goods. This tension highlights the other end of the spectrum by which Americans, as individuals, can participate in the development process: through trade and investment. The tension is reflected in the debate over the costs and benefits of globalization, the potential to use the Doha Round of WTO negotiations to further development agendas, and even whether pulling the most backward economies into world markets might reduce the level of international terror and conflict.

The market mechanisms that have developed the economy of the United States generate opportunities to invest in U.S.-based companies that have operations in the developing world, providing them with capital to deepen their involvement. These operations range from the labor-intensive manufacture of garments, shoes, and electronic goods for export to rich consumers, to the provision of capital-intensive infrastructure such as electricity generating plants, communications networks, and transportation systems, to the exploitation of natural resources that are needed to keep the global economy functioning.

Individuals are free to invest in whatever companies best satisfy their own personal understanding of how economic development takes place, or how best to reduce poverty. Nike, The GAP, and Nordstrom's procure low-cost shoes and clothing from labor-intensive companies abroad. Bechtel builds airports, transit systems, and dams. Boeing supplies aircraft that link the Third World to the First. Investment in any such company is to some extent an investment in development in this era of globalization.

More broadly, and no doubt riskier, investments can be made in single country funds sold on U.S. stock exchanges or even in particular companies in poor countries themselves that are listed on indigenous stock markets. The integration of global markets has brought not just exotic products to the shelves of U.S. retailers, but financial opportunities to our investors.

The point is that citizens of the United States have ample opportunity to exercise their *personal preferences* on how to be involved in the development of poor countries, as donors, consumers, and/or investors. This poses a difficult question: what remains for the U.S. government to do, using taxpayers' money on behalf of development in these same poor countries? A satisfactory answer to this question must involve actions or investments that private individuals acting alone, or private markets collectively, cannot accomplish on their own.

C. Public Choice Mechanisms and the Role of Government

Since one major function of government is to solve problems that require collective action in addition to, or even to correct for, private actions, answering this question is basically the same as asking "what is the appropriate role of government in the development process?" For citizens deeply skeptical that governments can be trusted to do anything but police their own borders, the answer will be "none." For citizens who see chronic poverty in the Third World as a failure of markets in the first place and a potential breeding ground for terrorists, the answer will be for the government to address the underlying causes of poverty.

At least two dimensions of government role are applicable here. First, what can third world governments themselves do to speed the development process and improve the distribution of its benefits, so that the poor in these countries benefit sooner rather than later? Ancillary to answering this question is the related issue of whether foreign assistance directly to these governments can help them help themselves. The empirical evidence suggests that best results occur when these two factors work together (Collier and Dollar, 2001; Collier, 2002)

The second dimension of governmental role is whether there are international institutions and publicly provided services that rich countries such as the United States should be building and providing to improve the environment in which national development takes place. Examples of such "global public goods" might include the International Financial Institutions (IFIs), with their mandates to stabilize the global economy and assist in the development process; internationally funded and commanded peacekeeping forces to

separate warring civil factions; agricultural research with regional or global applications; or funding for development of vaccines against tropical diseases that are of little threat to citizens of rich countries that are home to the major pharmaceutical companies. These global public goods, and the institutions to develop and deliver them, will not be provided in adequate amounts by private markets and individual action (Dalrymple, 2001). Governments, using taxpayers' money, will be needed to provide these global public goods.

USAID can play a crucial role in this process for the United States government through three activities. First, the agency can help develop the intellectual case, analytically and empirically, for the role and content of these public goods. Second, USAID can provide public leadership among the donor community in the mobilization of resources to fund these public goods and in the design and management of the institutions that will develop and deliver them. And third, USAID can be the appropriate vehicle to channel U.S. taxpayer support for these public goods to the international institutions that need them. For example, despite historically tight budgets, USAID-funded support for the Consultative Group for International Agricultural Research (CGIAR) has consistently been one of the major, and most stable, sources of on-going funding for this critical institution.

IV. The Role of Development Assistance

Development assistance is under challenge in most western societies. One set of critics argues that the funding levels are inadequate—Western European leaders are pushing for a doubling of official development assistance (ODA). In the United States, there is widespread doubt that development assistance works at all, so the case for any increase is dismissed. Analysts in the World Bank have been working hard to sort out what works and what does not. Their answer, perhaps not surprisingly, is that despite mistakes in the past, the donors in general and the World Bank in particular now know how to help poor countries get on a sustainable development path. More money, they argue, can be used very productively (Collier, 2002). It is useful to review some of this historical experience before reaching a conclusion for USAID.

A. Finding Focus

In the four decades since USAID was established in 1961, the goals and mechanisms of development assistance have broadened considerably. From an early emphasis on growth in gross domestic product (GDP) and containing communism, USAID's mandate grew to include, among many other things, reductions in poverty, improvements in child health, gender equity, environmental sustainability, transition to market economies and democratization.

Many institutions involved in development activities saw similar broadening of agendas. The Development Advisory Service (DAS), founded by Harvard University in the early 1960s to help poor countries prepare economic development plans, expanded its scope in 1975 to become the Harvard Institute for International Development (HIID). New

activities in health, education, and rural development were integrated into the Institute's traditional core of macroeconomists. The University's program on Women in Development was housed in HIID. An environmental program started in the late 1970s with the arrival of Theo Panayotou. Both in academia and government, development came to be seen as a multifaceted and complex process.

This progress came at a cost, however. Focus was lost as agendas multiplied. Harvard closed HIID in 1999, arguing that it was managerially too complex for an academic institution. Outside observers note that a failure of managerial oversight of HIID projects in Russia, funded by USAID, may have contributed to Harvard's decision. USAID was certainly distressed by apparent conflicts of interest among advisors and inappropriate, perhaps corrupt, outcomes. Managing such complex relationships was clearly difficult, perhaps beyond the range of an institution organized around academic procedures.

But the difficult management tasks extended to USAID as well. In the early 1990s, Brian Atwood tried to sharpen USAID's increasingly blurred focus by withdrawing the Agency from its economic growth agenda and emphasizing several themes of great interest to Congress: short-run humanitarian assistance, especially food aid; health care, especially child survival and family planning programs; environmental sustainability, especially the development of agricultural technology for poor farmers, including women, working in fragile ecosystems; and gender issues more broadly. As the challenges and opportunities presented by the collapse of communism in the former Soviet Union became apparent, democratization was added as a USAID objective.

Somehow lost in the multiple agendas and Agency efforts to program effectively in the face of developmental complexity was the need for poor countries to have growing economies as the only sustainable solution to all of their broader problems. The Natsios Administration recognizes the simple fact that economic growth is essential to any lasting reduction in poverty. Equally simply, the Administration recognizes the power of the increasingly integrated global market economy to drive the growth process in rich countries and poor alike (Hannon and Rhee, 2002).

The failure of most countries that are still poor to connect to global markets illuminates the task. It is to "get economies moving" if poverty is going to be reduced. This need for economic growth, and the focus on integration into global markets that it suggests, has been the organizing rationale for this chapter. Other chapters develop additional dimensions to the rationale for USAID and program elements to operationalize it. But to turn on its head the title of Paul Streeten's famous book on meeting basic needs, "first things first" means reestablishing economic growth as the foundation of development (Streeten, 1986).

B. New Thinking on the Role of Foreign Assistance

Does foreign assistance have any role in turning around the rather difficult record of economic performance over the past decade? Obviously, if entire societies chose to make themselves progressively poorer, the donor community is relatively powerless to

intercede. Even when the general population desperately wants better governance and economic opportunities, a venal government can make foreign assistance problematic, as the waning days of Mugabe in Zimbabwe indicate.

This chapter concludes with a focus on the role of foreign assistance in stimulating economic growth in poor countries. That is a narrow task when matched against disaster relief and humanitarian assistance, health and child survival interventions, strengthening democracy and governance, and fighting terrorism. Indeed, one might ask, why bother? If the tasks just listed are successfully implemented and governments of poor countries create a favorable business environment and capacity for integrating into the global economy, what else does foreign assistance need to do?

Even if the answer was not clear when the *Woods Report* was drafted in 1989, it is now. Without visible, sustainable economic growth, *none* of the above tasks can be successful for long. Economic growth is not *sufficient* to solve any of these problems, but it is *necessary* to fund their domestic solution and to generate the political support to continue solving them. A failure of economic growth means no sustained health gains, weaker governance and faltering democracies, and the emergence of rogue states that harbor narcotics dealers and terrorists. Economic growth is *everything* in the sense that nothing lasts without it.

1. Foreign Assistance and Economic Growth

So the important question is, how can foreign assistance stimulate economic growth in poor countries? The empirical record is mixed at best, but that is hardly surprising in view of the perverse incentives that linked donors and governments of developing countries over the past five decades. After all, very little foreign assistance, at least as measured as Official Development Assistance, or ODA, has specifically been justified as growth-enhancing, and a small share of that has actually been used in environments where it had much chance of enhancing growth (Alesina and Dollar, 2000). The Collier-Dollar results from World Bank research show there was no statistical relationship between volumes of ODA to individual countries and their record of economic growth in the 1960s and 1970s. By the 1980s and 1990s, however, ODA was growth-enhancing *conditional on favorable economic policies*. Crosswell finds a similar result for USAID assistance: the part of USAID funding that might legitimately be said to be targeted to poor countries to assist with their economic growth was successful in that task. Unfortunately, only a small share of USAID assistance was so targeted (Crosswell, 1999, 2001). Even worse, when assistance did work, the effective “tax rate” on success was so high as to serve as a serious disincentive to good economic policy making (Meltzer, 2000; Fox, 1997).

Historically, the shifting ideologies that justified foreign assistance to an American populace concerned about domestic issues, especially jobs, inflation, and security, have never focused squarely on economic growth in poor countries. Reconstruction of Europe after World War II, the containment of communism during the Cold War, the transition to democracy and market economies in the former Soviet Union, and now a commitment to

a broad war on terrorism have all trumped, at least in rhetoric, the rationale for long-run investments in the economic growth *process* in poor countries. But at least the record now shows that foreign assistance can speed up that process in the right settings.

2. The Mechanisms of Foreign Assistance

There are at least four mechanisms by which U.S. foreign assistance can speed up economic growth in poor countries, and the list does not include improved access to U.S. markets, the flow of direct foreign investment, remittances, and the actions and involvement of U.S. based or funded NGOs, all items that are likely to be more important for economic growth than official development assistance. The list does include:

1. Direct financial support of policies, programs and projects through bilateral assistance activities, often implemented by private sector U.S. contractors;
2. Engagement of governments of developing countries in policy dialogues, often with the explicit or implicit promise of greater aid if policy conditions are met;
3. Production of new knowledge about the development process through research or project activities funded by USAID or other agencies of the U.S. government; and
4. Bringing the United States "to the table" in broader discussions, often in multilateral settings, for diplomatic or trade negotiations. The value of this seat, of course, is its capacity to help open the door to the "\$10 trillion economy." *Connecting to the U.S. economy through trade and investment flows will be the main engine by which poor countries speed up their economic growth.*

The budget of USAID is no longer large enough for the agency to be a significant player in the direct provision of financial resources to poor countries, even in those circumstances where the payoff in faster economic growth might be high. Further, the agency no longer has the in-house analytical capacity to determine which countries might offer those circumstances. Neither situation is likely to change significantly within the time horizon of this report. *Accordingly, USAID should seek its influence over the development process primarily through policy dialogue, the production and dissemination of new knowledge, and as an advocate for trade-led growth both at home and abroad.*

Of course, engaging in meaningful policy dialogue also requires extensive knowledge of a country's political economy and the local capacity for pragmatic policy analysis (as opposed to ideologically driven policy recommendations not based specifically on local conditions). But here, USAID's premier role as a contracting agent can be a very efficient mechanism for accessing knowledgeable analysts, especially if there has been an on-going effort in key countries to build the research and knowledge base as a way to produce and retain such analysts. Thus policy dialogue and knowledge generation should be thought of as mirror images that require coordinated and integrated support for lengthy periods of time. An especially poignant example that links the deteriorating capacity for

economic growth in Africa, because HIV/AIDS is “hollowing out” institutions of economic governance, to an indigenous research program to understand the consequences, is presented in Box 4.

[Box 4: Letter from Malcolm MacPherson to Andrew Natsios on HIV/AIDS]

Many environments are hostile to economic growth but still require a U.S. presence for diplomatic or security reasons. Even in such settings it is possible to provide support to reform-minded elites through travel and study grants or U.S.-supported forums as platforms for reformers’ messages. “Engaging civil society” has become something of a donor platitude because it is meant to serve as a substitute for discussions with venal or unresponsive governments. Still, building civil institutions, including legal and political institutions, takes time and investments, and donors can help. In addition, no one can predict when a “window of opportunity” will open for effective dialogue with a genuinely reform-minded government, and having effective civil institutions to help shape policy and implementation can be crucial at such times (Grindle and Thomas, 1991).

Having the United States “at the table” as policy discussions are held, trade openings are negotiated, and international treaties are brokered is no doubt the most important way the U.S. can speed economic growth in developing countries. Indeed, the role is so important for trade and investment discussions that a separate chapter of this report is devoted to the topic (Hannon and Rhee). But a serious issue arises immediately with this recognition because the United States does not speak with one voice. Even the United States government has many agencies with many agendas, and outsiders are often bewildered by which one is actually “speaking” for the country. As a very simple example, who speaks for the United States Government on economic assistance to poor countries? On different occasions, the correct answer can be the President, the Secretary of State, the Secretary of the Treasury, the Secretary of Agriculture, or even the Administrator of USAID.

The issue is important because the United States is the most powerful nation in the world. Obligations come with this power. One is to provide leadership on issues that affect global and national security, whether directly as in the fight on terrorism, or indirectly, through efforts to develop poor countries. Thus clear guidelines on which agency will take responsibility for which dimensions of foreign assistance, even narrowly in the field of assistance for economic growth, will be welcome both within the U.S. government and by participants beyond.

C. So? Missed Opportunities, New Opportunities, and Next Steps

There is an understandable political impatience with academic debate. While the main points of agreement are ignored as uninteresting, controversy rages over the decimal points. Some of that is on view here. Economic growth is good for the poor. But it could be better. Agricultural development is good for food security, poverty reduction, and economic growth. But, in theory, the same or larger benefits could be achieved by

importing cheaper food from world markets and investing the difference in export processing zones. And so it goes, the best as the enemy of the good.

And yet. It is only from the perspective of theory that we know what is possible, what we have missed, what new opportunities await. From this perspective, the global economy missed three opportunities to assist economic development over the past several decades. First, two decades intervened between the first and the second world food conferences with little to show in terms of increased food security and reduced poverty in the most vulnerable countries, those that might have hoped that Henry Kissinger's promise in 1976 that no child would go to bed hungry within a decade actually would translate into action. Other countries, especially in East and Southeast Asia, used the two decades to improve their rural infrastructure, agricultural technology, and economic competitiveness. They were rewarded with reduced poverty, improved food security, and rapid economic growth, but the global promises figured little in this performance.

Second, subsidies to farmers in rich countries have become larger over the past two decades, not smaller, despite promises made at the Uruguay Round. The result has not just been a large budget burden in OECD countries. More importantly for developing countries, the result has been increasing surpluses dumped on world markets, depressing world prices and the incomes of farmers in poor countries who have to compete with these prices. The best guess is that every dollar of agricultural subsidies in rich countries costs farmers in poor countries a similar amount. And official development assistance is only one quarter of this total. It is not a fair trade.

Third, the Cold War took a terrible toll on good governance. If we now recognize how important good economic governance is to the foundations of economic development, we are just coming to realize how the willingness of governments in the West to do business with any government ostensibly in the anti-communist camp undermined those institutional foundations. Many decades have been lost in the creation of sound economic governance and they cannot be recaptured overnight.

From this rather desolate historical record comes unique historical opportunities. The United States in particular, and the West in general, won the Cold War. With that victory comes the freedom to seek new goals. Angry individuals, whole societies left behind by the sweep of globalization, even trading partners frightened by the technological superiority of the United States, are challenging this freedom. When the challenge has been in the marketplace, it has been met in the marketplace. When the challenge has been violent, it has been met with a military resolve that has surprised even our allies. But the war on terrorism must not mask the unique opportunity open to the world at the start of a new millennium--to build peaceful, prosperous, and open societies that engage the rest of the world as willing partners.

This chapter has tried to identify this potential, the constraints on reaching it, and the realistic alternatives before the United States and the developing world. But realism is in the eye of the beholder, and it is the nature of constraints to keep changing. So the real purpose of this chapter has been to present a framework to organize and understand

alternatives, conditioned by their settings, as a platform for building country-specific strategies that address their unique challenges in getting economies moving while bringing the poor into the process. "Unique challenges" is the message here. No single key will fit as countries seek to unlock their potential for rapid economic growth.

USAID also has unique opportunities in this challenging context. It can provide political leadership within the U.S. government, and the world community at large, on fostering a development-oriented international trade regime out of the Doha Round of WTO negotiations. It can link the knowledge generated in the world's best system of research universities to the technical assistance required on a day-by-day basis in developing countries. Perhaps most importantly, USAID has the opportunity to reclaim the intellectual leadership that was its birthright—to speak out on the importance to the United States of fostering economic development and reducing poverty everywhere in the world.

Box 1
International Development Resources on the Internet

[This annotated list was taken from Perkins, Radelet, Snodgrass, Gillis and Roemer, *Economics of Development*, 5th Edition, New York: W. W. Norton and Co. 2001.]

The World Bank

<http://www.worldbank.org/html/extdr/regions.htm>

<http://www.worldbank.org/html/extdr/thematic.htm>

<http://www.worldbank.org/proverty/>

The World Bank website contains a wide range of information on specific countries and key development issues. The first of the three sites just listed contains brief economic overviews (including basic data) on every developing country. The second is a gateway to documents and information on a large assortment of development themes and issues. The third is a link to PovertyNet, a World Bank site aimed at providing resources for people and organizations working to understand and alleviate poverty.

The International Development Research Centre (IDRC)

<http://www.idrc.ca/library/world/>

Sponsored by the Canadian government, the IDRC gateway provides links to a large number of publications, databases, and development institutions.

Global Macroeconomic and Financial Policy Site

<http://stern.nyu.edu/globalmacro/>

Maintained by Professor Nouriel Roubini of New York University's Stern School of Business, this site provides links to newspaper and magazine articles on current issues, as well as academic and government analyses of exchange rate regimes, financial sector policies, financial crises, and the international financial system. It also provides links to information on specific countries and to selected macroeconomic and financial databases.

Netaid.org

<http://www.netaid.org/>

Netaid's mission is to use the power of the Internet to create opportunities to end the cycle of extreme poverty and to provide information on successful development projects and innovative organizations.

The World Factbook

<http://www.odci.gov/cia/publications/factbook/index.html>

Produced by the CIA, The World Factbook contains maps and information on government structures, key personnel, the economy, and other basic information on countries around the world.

IMF Directory of Economic, Commodity, and Development Organizations

<http://www.imf.org/np/sec/decco/contents.htm>

The IMF directory provides background information on and links to over 100 regional economic organizations and intergovernmental commodity and development organizations.

ELDIS: The Electronic Development and Environment Information System

<http://www.ids.ac.uk/eldis/eldis.html>

The ELDIS gateway provides a wealth of information on development and the environment. Hosted by the Institute of Development Studies and the University of Sussex, ELDIS provides links to country-specific pages, full-text reports and research papers, recent news items, and other information.

Oneworld.net

<http://www.oneworld.org/>

Oneworld is an international network of cooperative centers with the objectives of promoting human rights and sustainable development. This site focuses on current news items and key development issues and includes information from a large number of development organizations.

Box 2

The Elasticity of Connection Between Economic Growth and Poverty Reduction

To estimate the elasticity of connection, Timmer regressed the *level* of income of each quintile on overall per capita GDP. This “levels” estimation includes country and time fixed effects (dummy variables for each developing country included and for each decade from the 1960’s to the 1990’s). The country fixed effects allow shifts in the regression intercept for each country, but assume the same slope, or elasticity of connection, for all countries. The fixed effects for decades allow a shift in the regression intercept for each 10-year decade.

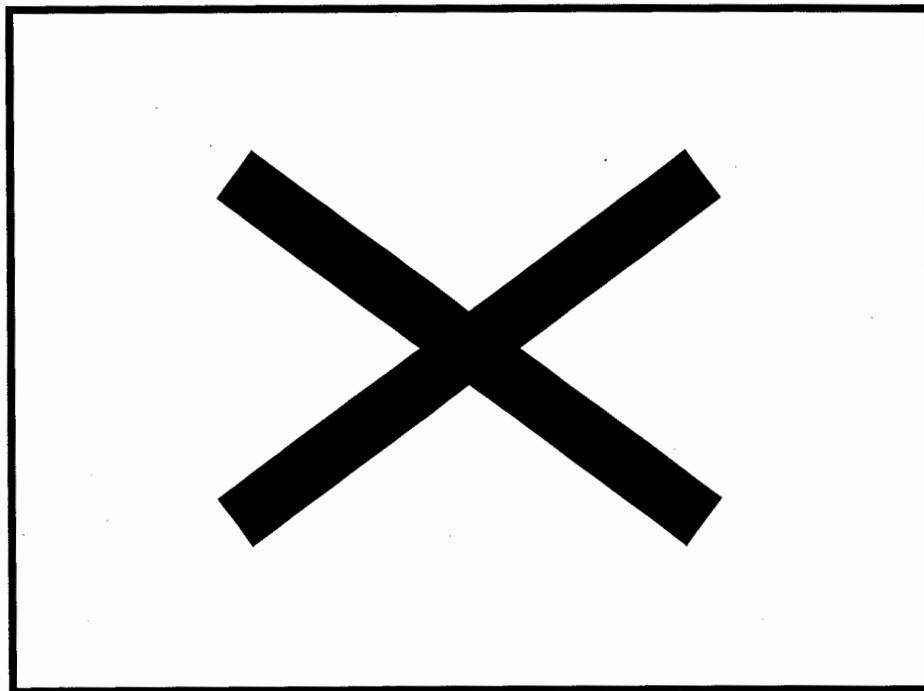
The paper also restricted the sample of countries to those that have a significant agriculture sector, are reasonably large, and are considered developing countries. For this reason, countries such as Hong Kong and Singapore were excluded, as were most countries with populations smaller than 6 million (Costa Rica and Jamaica are the exceptions to include better representation of Latin America and the Caribbean).

To examine the impacts of inequality on income levels of the poor, Timmer constructed a variable that measures the *relative* income gap between the rich and the poor. A dummy variable was then created that is equal to one when the gap in income between the highest and lowest quintiles is more than twice as large as average income. Timmer then disaggregated income into sectoral components from agriculture and non-agriculture in order to examine whether the sectoral composition of labor productivity matters to the incomes earned by each quintile.

Earlier results from asking a similar question had already indicated that growth in the agricultural sector seems to have a much larger impact on growth of incomes in the bottom quintile than growth in services or industry (Ravallion and Datt, 1996; Gallup, Radelet, and Warner, 1997; Mellor, 2000). The question here is framed in terms of relative labor productivities. Do the per capita labor productivities of workers in agriculture and non-agriculture have differential effects on the average earnings in each income quintile? Put another way, do the poor benefit more from growth in the agriculture or the non-agriculture sector?

Timmer found that in unequal countries, that is, where the relative income gap is large, there is a pronounced Kuznets effect: the elasticity of connection for the poorest quintile is significantly lower than for the higher quintiles; the poor appear to be nearly disconnected from the growth process in these economies. The elasticity of connection for the poorest quintile is 0.257 for agriculture and 0.449 for non-agriculture. In contrast, for those economies with better income distribution, the elasticity of connection for the poor in the agriculture sector is 1.146 and 1.018 for non-agriculture. This is slightly higher than the elasticities for the upper quintiles, suggesting a slight but significant “anti-Kuznets” effect in these economies. These results are illustrated in Figure 1 below.

Figure 1



Source: Timmer (1997)

Box 3
An Empirical Example Comparing Brazil and Thailand

Building on the earlier analytical and empirical work in Timmer (1997), it is possible to use the definitions and returns to capital discussed in the text to construct crude estimates of the value of human and financial capital assets by income quintiles (for details, see Gugerty and Timmer, 1999). As a particularly interesting comparison over time and space, Table 1 shows these asset values by quintile for Thailand and Brazil over a three-decade period.

Table 1

Changes in income and asset distributions over a three-decade period in Brazil and Thailand

Quintile	Per capita income (\$PPP)		Annual per capita quintile growth	Per capita human capital (\$000)		Per capita financial capital (\$000)	
	1962	1992		1962	1992	1962	1992
Thailand, 1962-1992							
I	397	726	2.03%	0.64	7.22	0	0
II	427	1491		1.24	22.52	0	0
III	600	2276		4.70	38.22	0	0
IV	1066	3649		14.02	65.68	0	0
V	2470	11478	5.25%	42.10	120.00	0	102.26
RELGAP	2.089	2.740		3.470	2.431		
Brazil, 1960-1989							
I	285	534	2.19%	0	3.38	0	0
II	614	1047		4.98	13.64	0	0
III	970	1965		12.10	32.00	0	0
IV	1700	3909		26.70	70.88	0	0
V	5331	13927	3.37%	99.32	120.00	0	151.24
RELGAP	2.835	3.135		3.306	2.223		

Both Brazil and Thailand grew fairly rapidly during this three-decade period, Brazil from per capita income of \$1,780 in 1960 to \$4,272 in 1989 (3.06% annual growth), Thailand from \$992 in 1962 to \$3,924 in 1992 (4.69% annual growth). Income distribution in both countries, as measured by RELGAP, worsened, from an average level of 2.089 in Thailand at the start to a highly unequal level of 2.740 at the end.² In Brazil, inequality was already very high at the start of the period, and worsened to a level of 3.135 at the end, one of the worst distributions of income in the entire Deininger-Squire sample.

Not surprisingly, asset distributions in both countries also changed quite significantly, but not always in the expected direction. Levels of human capital increased dramatically for all income classes, but much faster for the poor than for the rich, who were already closer to the plateau levels used in this analysis. Increases of two to three times were the norm in Brazil; full order of magnitude increases occurred in Thailand. Even as income distribution worsened, *the distribution of human capital became more equal*, as the poor were finally included in the growth process to some extent.

² RELGAP is defined as the average per capita income in the top quintile minus the average per capita income in the bottom quintile, divided by the average per capita income for the society. When RELGAP is greater than two, economies have a difficult time sustaining growth and connecting the poor to it (Timmer, 1997).

This result is supported by empirical research that indicates that changes in primary school enrollment are strongly positively associated with growth in lower income countries (Easterly, 1997; de Gregorio and Lee, 1998). Because of the self-limiting nature of human capital accumulation, however, this dimension of asset distribution is also limited in its potential contribution to future earnings. In addition, given the constraints on investment in human capital by the poor suggested by the theoretic literature, it is clear that government policy will play an important role in human capital accumulation at lower levels of development.

The open-ended nature of *financial assets* avoids the ceilings inherent in accumulation of human capital. If the distribution of financial assets is or becomes highly skewed during the growth process, at some point the income-earning potential of these assets will lead to a self-reinforcing skewing of incomes. Both Brazil and Thailand seem to have reached such a point by around 1990. In Brazil, a simple dynamic calculation shows that if all incomes above the human capital level of \$6365 are saved and invested in financial assets that earn the assumed five percent per year, within a decade the upper quintile of income earners will receive the entire additional income generated by an economy growing at five percent per capita per year.

At some point in the development process, concentration of ownership of financial assets can lead to sharply skewed income distribution as an inevitable result of economic growth, a result that is not typically seen in the early stages of growth when the dependence on investments in human capital are far more important for the distribution of income and for lifting the poor out of absolute poverty (Ravallion, 1996).

Box 4 **HIV/AIDS and Capacity Building in Africa**

Dear Mr. Natsios:

Thank you for taking the time to talk to me after the panel discussion at the Council for Foreign Relations supper at Harvard on Monday evening. Your comments touched on two issues that relate to my experience in Africa. The first is the potential for HIV/AIDS to contribute to state failure. The second is the problem of mass depression. (Rwanda was the example you gave.) The first point becomes increasingly clearer to people who work within key organizations in Southern Africa (central banks, ministries of finance). These organizations are often hollow shells operating with depleted human capacity and little hope under current circumstances of that capacity being replenished. The second point also comes from working in these organizations (and living and traveling in Southern and East Africa). A little noted effect of the HIV/AIDS epidemic has been profound sense of sorrow and gloom that pervades these organizations in particular, and societies more generally. The human spirit may be resilient but the toll of death and debility over the last decade has been extreme. Unfortunately, as we are all aware, the

immediate future is unlikely to show any improvement, even if the broad-based provision of anti-retroviral drugs were feasible, as some people noisily argue.

I have been dealing with the consequences of HIV/AIDS in my work in Africa for almost a decade. Over that period, several questions have bothered me. My work has been primarily within ministries of finance and central banks doing two things: helping countries create the conditions for sustained economic reform; and providing training to build the capacity for these organizations to continue the reforms. HIV/AIDS has cut across this effort in fundamental ways. The most obvious is the loss of skilled personnel and labor time. Less obvious has been the impact of behavioral changes that occur as growing numbers of people recognize (or suspect) that their productive life spans are being dramatically truncated. The questions I have been trying to address relate to the economic effects (at both the micro and macro levels) that occur when decision horizons are prematurely foreshortened. There are many dimensions involved. For example, why should people support economic reforms (some of which have harsh immediate impacts) in the hope that conditions will improve at some future date that many of them will not be around to witness or benefit from? Similarly, why should individuals who already have some skills (e.g., a BA) forego income and leisure in order to deepen their capacities if the prospects of enjoying the higher income and status associated with those skills has sharply diminished? This point can be flipped around to ask the same question about opportunism. Why should any one who knows their time is limited refrain from opportunism (goofing off, prolonged absenteeism) or even overtly criminal behavior? What punishment can an organization or society prescribe that is worse than the fate they expect? These examples can be readily extended. Indeed, because so much of economic behavior is based on expectations of the future and the anticipated flows of benefits and costs, many human activities – investment, migration, savings, education, portfolio allocation, trade and exchange, cooperation, to name a few – are covered. Curiously, researchers who model the impact of HIV/AIDS on economic growth (whether they make the connection with capacity deepening or not) do not draw on these economic principles. The standard projection models (ING Barings, Abt Associates, Arndt/Lewis at the World Bank, and even a recent paper from the IMF) are relatively mechanistic. They typically involve computable general equilibrium or neoclassical growth models upon which most of the behavioral consequences are imposed to produce scenarios that compare situations “with” and “without” AIDS. Not surprisingly, the ‘with AIDS’ growth paths are lower than the ‘without AIDS’ growth paths. Ultimately, however, the epidemic is assumed to work its way through the system and growth resumes.

All of this is far too clinical and from my experience in Southern Africa, beside the point. It is not clear what are the policy implications. For example, what can be done to change the incentives that are driving the economic behavior that results in lower growth? Furthermore, I am completely at a loss to understand what a ‘without AIDS’ scenario can mean in countries such as Botswana, South Africa, Zambia, and Zimbabwe. These countries have had their growth paths fundamentally altered precisely because the spread of HIV/AIDS has changed the expectations and behavior of most, if not all, members of the respective populations.

For these reasons, I have urged that USAID should be encouraging groups of African researchers to study in more detail the behavioral dimensions related to the impact of HIV/AIDS on economic growth. Such study, I believe, would highlight the need for a radical rethinking of the way we train, manage, motivate, discipline, and otherwise deal with the growing number of people (in all skill categories) whose productive lives are being drastically shortened. The problems of capacity deepening have especially concerned me. In this regard, how do we cut across the adverse expectations that leads from declining skills (and the diminished incentive to invest in skill acquisition) due to HIV/AIDS and economic growth. History has shown that a key element in sustained economic growth is improved productivity. As the spread of HIV/AIDS erodes human capacities, a major question that needs to be addressed is what modifications can we make in training activities, work flow, organizational structure, and management procedures to compensate for these losses? To illustrate the relevance of this point, much has been made of the importance of extension in raising agricultural output and improving food security. But, what do we extend to children and grandparents who now head many agricultural households when the parents (the object of standard extension programs) have died or become debilitated? More important, since the education levels of the children and grandparents are generally lower than their parents, how do we extend whatever research may prove to be useful or productive or profitable? Questions such as these have been at the core of my work on tracing the effects of HIV/AIDS on sustained economic growth. My conviction is that unless we can determine ways of maintaining and even deepening capacity in the face of the HIV/AIDS epidemic, African countries cannot grow and develop.

USAID has devoted so much effort and resources to HIV prevention, social marketing, strengthening of health systems and related activities. This effort would be greatly strengthened if attention were also given to the questions of how capacities can be deepened; how HIV-positive but still productive workers can be managed, motivated, and induced to add to national income rather than subtract from it; and how overall productivity and growth can be maintained in the face of mounting losses due to HIV/AIDS. The Agency has appropriately placed heavy emphasis on the health related aspects of HIV/AIDS. But, some effort also should be given to finding ways of reducing the negative effects of HIV/AIDS on economic growth.

I would be happy to expand further on these ideas if you think it useful. Thank you for your interest and help. Kind regards.

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